

Abstract

5 A tracing or marking isotope micro-bubble reagent with targeting substance, the
combination or mixture of ultrasonic micro-bubble imaging reagent with tracing or
marking isotope. The tracing or marking isotope includes generally medical used
isotopes. The micro-bubble reagent includes fluoro-carbon type, medical salt water
type, semi lactose bubble liquid type, envelope bubble liquid type and carbon
dioxide generating type. Large molecule substance is selected as the carrier of
ultrasonic reagent to wrap, stick, stabilize and carry the bubbles. The tracing or
10 marking isotope micro-bubble reagent with targeting substance is applied to
position the tumor area in the treatment of tumor by using low frequency, low
energy ultrasonic to induce the cavitation effect of micro-bubbles to form thrombus
embolus in blood vessels, Meanwhile, radial β isotope is applied to radiate the
tumor cells by using the ionizing radiation biological effect thereof.